

THE ORIGIN OF A SYMPATRIC SPECIES IN COLIAS THROUGH THE AID OF NATURAL HYBRIDIZATION

WILLIAM HOVANITZ

(continued from volume 2, page 223)

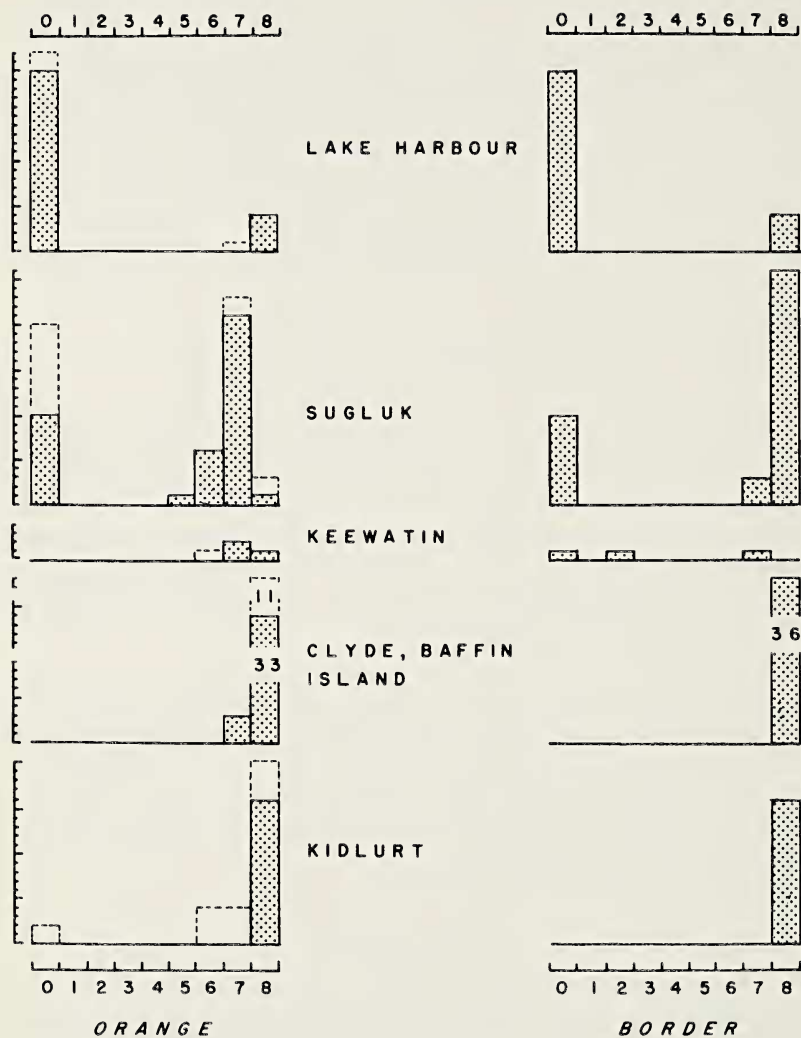
V POPULATION COMPARISONS

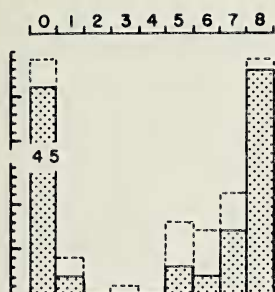
Section IV of this series showed by means of scatter diagrams, the relationship between the variations of two characteristics in arctic populations of *Colias*. This section (V) will show the general distribution within each population of each of the two characteristics so as to give a better idea of the nature of the introgression within the populations in a way that the conelation diagrams could not indicate.

The characteristics are those previously illustrated on figure 8 (page 271, vol. 1) and fig. 9 (page 206, vol. 2), each being graded in a series of nine classes, 0, 1, 2, 3, 4, 5, 6, 7 and 8. Using these classes, histograms have been constructed based upon the numerical values for each class. The histograms so constructed are illustrated in figures 43 through 49.

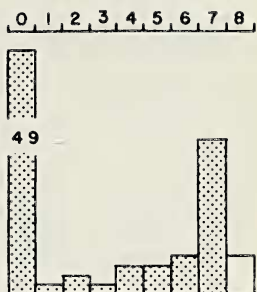
to be continued

Figures 43 through 49. Histograms illustrating the variation in pigmentation (left) and border pattern grade (right) of various arctic populations. The grades have been illustrated in earlier sections of this paper. Note that some populations (such as Lake Harbour) show no introgression but only *Colias hecla* or *Colia nastes*, others (such as Reindeer depot) show no introgression but only one species, either *C. nastes* or *C. hecla*, and others show a wide range of introgression with or without many parental species (Spence Bay, Coral Harbour, Repulse Bay, Chesterfield Inlet).

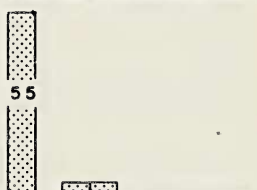




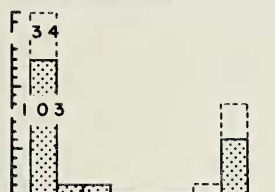
BAKER LAKE



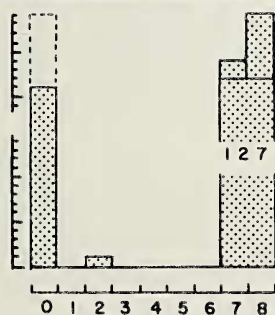
FORT CHIMO



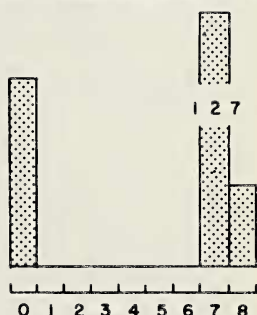
PAYNE BAY



PORT HARRISON

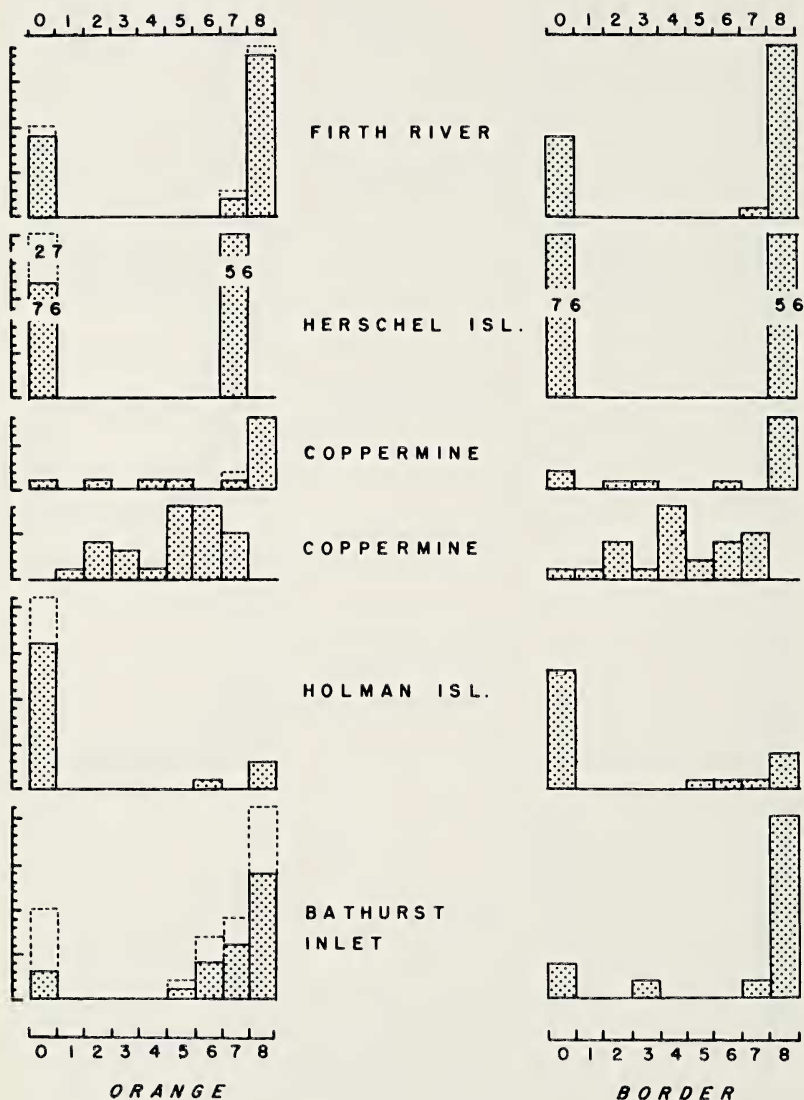


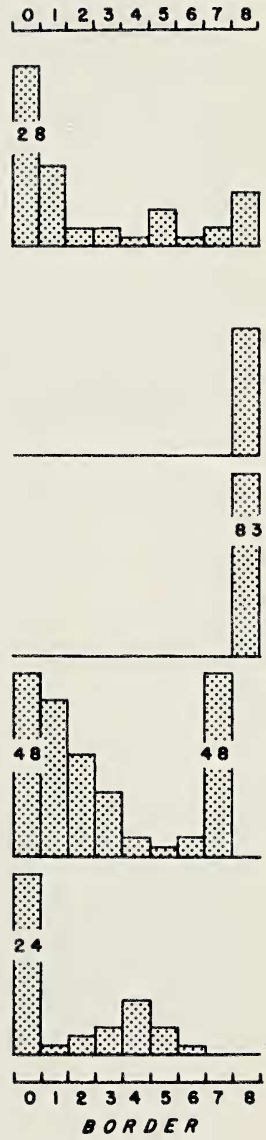
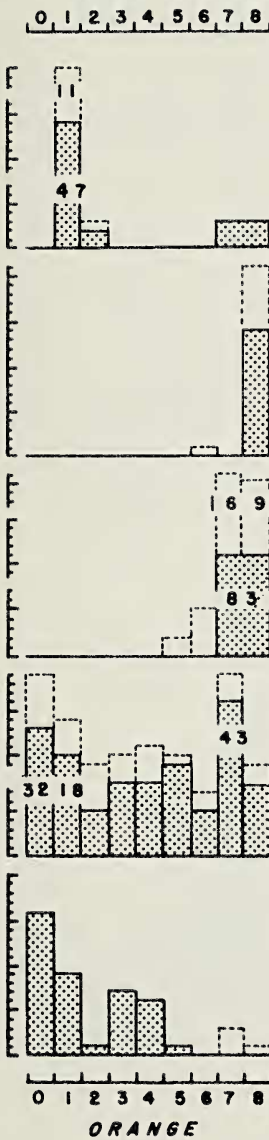
FROBISHER BAY

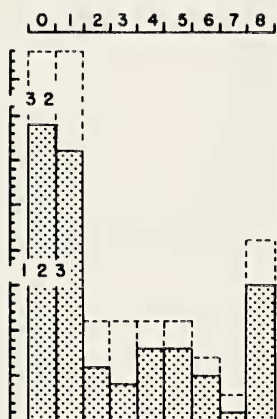


ORANGE

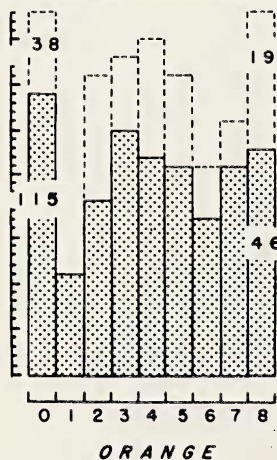
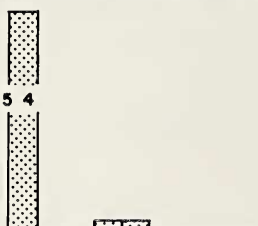
BORDER



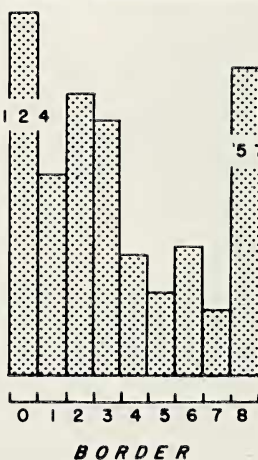


CORAL HARBOUR
(1952)CORAL HARBOUR
(1948)

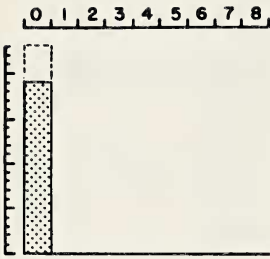
REPULSE BAY



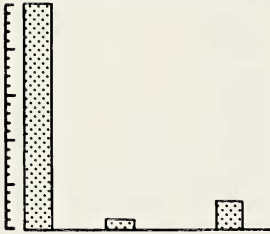
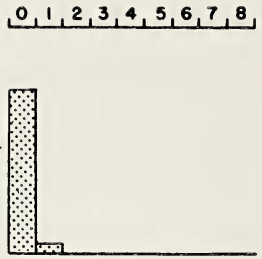
ORANGE



BORDER



REINDEER DEPOT



MEADE RIVER



0 1 2 3 4 5 6 7 8

ORANGE

0 1 2 3 4 5 6 7 8

BORDER

(to be continued)